



Women Chemists Events at ACS MARM 2019



Leadership Workshop: "Collaboration Across Boundaries"
Panel Workshop: "Science Policy and Government a bridge
between research and Public – a path for non-traditional
chemists"

MARM 2019
Thursday, May 30th, 2019
8:00 am-3:00 pm
UMBC
1000 Hilltop Circle
Baltimore, MD 21250



2019 Section Officers:

Chair 2019	Dana Ferraris, McDaniel College, dferraris@mcdaniel.edu
Vice Chair 2018	Pumtiwitt McCarthy, Morgan State University, pumtiwitt.mccarthy@morgan.edu
Chair-Elect (Chair 2020).	Eric C. Cotton, Community College of Baltimore County, cccotton2@ccbcmd.edu
Secretary 2019	. Louise Hellwig, Morgan State University, louise.hellwig@morgan.edu
Treasurer 2019	Angela Sherman, Notre Dame of Maryland University, asherman@ndm.edu
Past Chair (2018)	Beatrice Salazar, <u>beatricesalazar1@gmail.com</u>

2019 SECTION COMMITTEE ON NOMINATIONS

Chair of the Committee on Nominations James Saunders, <u>isaunders@towson.edu</u>
Additional 4 members: Dana Ferraris, Chair-2019, dferraris@mcdaniel.edu
Pumtiwitt McCarthy, Vice Chair-2019, pumtiwitt.mccarthy@morgan.edu
Beatrice Salazar, Chair-2018, beatricesalazar1@gmail.com
Sara Narayan, Stevenson University, SNARAYAN@stevenson.edu
Sandra Young, RDECOM, sandra.k.young26.civ@mail.mil

COUNCILORS/COMMITTEES

1.	2018-2020 Dana Ferraris	Chair of the Section Program Committee (McDaniel College), <u>dferraris@mcdaniel.edu</u>
2.	2018-2020 Jan Kolakowski	Member of ACS Committee on Economic and professional Affairs, Chair of Section Finance/Investment
		Committee, jek6042@gmail.com
3.	2017-2019 Merle Eiss	Member of ACS Meetings and Expositions Committee, meiss32@aol.com
4.	2017-2019 Paul Smith	Member of ACS Local Section Activities(LSAC) Committee
		Associate/Chair of Long Range Planning Committee (MARM-2019) (UMBC), pjsmith@umbc.edu
5.	2018-2020 Stephanie Watson	Member of the ACS Committee on Committees (ConC) Liaison on
		Nomenclature, Terminology and Symbols (NIST), stephanie.watson@nist.gov
		 2018-2020 Jan Kolakowski 2017-2019 Merle Eiss 2017-2019 Paul Smith

ALTERNATE COUNCILORS/COMMITTEES

1.	2017-2019 Kelly Elkins	Member of the ACS Ethics Committee, Kmelkins@towson.edu
2.	2017-2019 Pumtiwitt McCarthy	Chair of Publicity Committee, pumtiwitt.mccarthy@morgan.edu
3.	2017-2019 Sandra Young	Chair of Community Outreach Activities Committee, sandra.k.young26.civ@mail.mil
4.	2018-2020 Michele Foss	Committee TBA, foss.michele@gmail.com
5.	2018-2020 Sarah Zimmerman	Chair of Member Assistance Committee,* scatzim@gmail.com

MEMBERS-at-Large

Suzanne Procell, CCDC Chemical Biological Center, suzanne.a.procell.civ@mail.mil
Rose A. Pesce-Rodriguez, RDECOM, rose.a.pesce-rodriguez.civ@mail.mil
Sara Narayan, Stevenson University, <a href="mailto:suxana-suzanne-

Awards Committee Chairs & Local Section Committees Chairs

Maryland Section on the Web: Webmaster:

<u>maryland.sites.acs.org</u> Pumtiwitt McCarthy, <u>Pumtiwitt.McCarthy@morgan.edu</u>

Chesapeake Chemist Editor-in-Chief: Contact us at:

 $Pumtiwitt\ McCarthy,\ \underline{Pumtiwitt.McCarthy@morgan.edu} \qquad \underline{acsmarylandsection 10@gmail.com}$

CHAIR'S MESSAGE DANA FERRARIS

Maryland Section

Dear colleagues:

I am looking forward to working with ACS members of the Maryland section and the Executive Committee to make 2019 a productive year by continuing our programming and supporting scientific exchange specifically at this year's Mid-Atlantic Regional Meeting which will be held in our section.

I have set three major goals for our section this year. The first is to maintain our programming at the same level as previous years. We have a track record of several events throughout the year that are well attended and bring members of the section together. I want to ensure that these events run smoothly and are well advertised and attended. These events include the student awards, the US National Chemistry Olympiad, the Remsen Award symposium, Women Chemist's panel, the Braude award and the Maryland Chemist of the year. The second goal is to continue to support the goals from last year of increasing participation from members within our section. This goal goes hand in hand with my last goal which is to increase our presence on social media and engage the younger members of our section.

I look forward to meeting new members and working with the Executive Committee to ensure a successful 2019.

Dana Ferraris

Women's Chemists Events at ACS MARM

Organizers:

Sara Narayan, **Ph.D.**, Stevenson University **Kelly Elkins**, **Ph.D.**, Towson University

<u>Leadership Workshop, 8:00 am-12:00 noon, Collaborating Across Boundaries</u>

Note: the \$50 fee for ACS members will be REFUNDED upon completion of the course

Some of the greatest achievements in science, medicine, the arts, and business have been the result of collaboration among groups of people who shared their resources, their visions, and their expertise to produce unique, innovative products and solutions to problems. Without collaboration, the potential power of sharing ideas and information is lost. Now more than ever, collaboration is the way we need to work – in teams and in larger organizations as well.

To be a highly effective partner or team member, you need to learn the core strategies and tools to make collaboration more productive. In this 4-hour hands-on facilitated course you will learn how to make collaborative decisions, develop common goals, ensure equity between what people bring and what they gain from the effort, and gain commitment, establish trust and resolve conflicts.

<u>Luncheon, 12:00 - 1:30 pm</u>

Join us for a catered lunch with our organizers and speakers. *Must preregister*.

Keynote Speaker: "My Journey Through Science"

Pumtiwitt McCarthy, Ph.D.

Assistant Professor, Morgan State University

Panel Discussion, 1:30-3:00 pm, "Science Policy and Government a bridge between research and Public – a path for non-traditional chemist"

Panelists:

Gianna Arnold, M.S. Biotechnology, J.D.

Partner, Saul Ewing Arnstein & Lehr

Victoria Gunderson, Ph.D.

2012-2013 ACS Congressional Fellow, 2013-2014 Executive Branch Fellow, U.S. Department of State, International Trade Specialist, Office of Energy and Environmental Industries, International Trade Administration, U.S. Department of Commerce

Irene Hantman, J.D.

Counsel, Verdant Law, PLLC, Adjunct Professor, University of Maryland School of Law

Wynne Kandur, Ph.D., PMP

Senior National Security Analyst, The Johns Hopkins University Applied Physics Laboratory **Ashley Predith, Ph.D.**

Executive Director, President's Council of Advisors on Science and Technology

Rachael Hansel Vohrer, Ph.D.

Chief of Staff, Office of the Assistant Secretary of Defense for Readiness

Stephanie Watson, Ph.D.

Group Leader - Polymeric Materials Group, NIST

MARM Women Chemist Committee Program Organizers



Kelly Elkins, Ph.D.



Sara Narayan, Ph.D.

Keynote Speaker



Pumtiwitt McCarthy, Ph.D.

Panelists



Gianna Arnold, M.S., J.D.



Victoria Gunderson, Ph.D.



Irene Hantman, J.D.



Wynne Kandur, Ph.D., PMP



Ashley Predith, Ph.D.



Rachael Hansel Vohrer, Ph.D.



Stephanie Watson, Ph.D.

May 2019

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MARM 2019 PANELS, WORKSHOPS, AND SOCIAL AND OTHER EVENTS

Thursday Morning

Leadership Workshop: Collaborating Across Boundaries

Career Pathways Workshop

Thursday Afternoon

Women Chemists Committee Luncheon

ACS Resume Review

Panel: Science Policy & Government - A Bridge Between Research and the Public, and a Path for Non-

Traditional Chemists

Tour of the Shimadzu Demo Facility

Thursday Evening

Remsen Award Reception

Friday Morning

Introduction to IONiC/VIPEr: Using and Sharing Inorganic Chemistry Education Resources

Panel: Recent Chemistry Grads Share Their Experiences

Friday Afternoon

Undergraduate and Employment Luncheon

50/60/70 Year Member Luncheon

Panel: Chemistry Jobs, Employers' Perspectives

Panel: Addressing Challenges for International Chemistry Students and International Chemistry

Professionals

Friday Evening

Beer Chemistry

Beer with Baltimore Brewers

Saturday Morning

ACS Outreach Training Program

Teaching Forensics in the Middle School Classroom

Green Chemistry Workshop – Catalyzing Greener Student Clubs

Saturday Afternoon

Awards Luncheon

Chemagination: A Competition for High School Chemistry Students

Governance Event

TECHNICAL PROGRAM OVERVIEW

Thursday Morning

Atmospheric and Environmental Chemistry 1 Inorganic Chemistry

Thursday Afternoon

Remsen Award Symposium
Atmospheric and Environmental Chemistry 2
Biochemistry

Posters: Organic and Medicinal Chemistry

Thursday Evening

Posters: Nano and Environmental Chemistry
Remsen Award Lecture

Friday Morning

Looking at the opioid crisis through different lenses Spectroscopy and Homeland Security Food Chemistry Digital Technologies in the Undergraduate Classroom 1 Posters: Biochemistry and Inorganic Chemistry

Friday Afternoon

Combating the opioid crisis with chemistry Photonic Materials Digital Technologies in the Undergraduate Classroom 2

Friday Evening

Posters: Analytical and Physical Chemistry Beer Chemistry

Saturday Morning

Emerging Investigators: Early Career Organic Chemists

Physical Chemistry 1

Optimization Methods in Chemistry

Humanizing Science: The Key Roles of Mentoring and Building Community

Posters: Undergraduate Poster Session 1

Saturday Afternoon

Physical Chemistry 2
Organic & Medicinal Chemistry
Analytical Chemistry

Posters: Undergraduate Poster Session 2

Recent Events

Congratulations to the 2018 Maryland Chemist of the Year! Dr. Jared DeCoste

Edgewood Chemical Biological Center

"Interdisciplinary Approaches to Metal-Organic Framework Design: A Scientific Playground & Collaborative Opportunity"

Wednesday, February 6, 2019

Mountain Branch Golf Course Grille & Pub





Photos courtesy of Jared DeCoste and Beatrice Salazar

Abstract: Metal-organic frameworks (MOFs) are highly porous, modular materials made of simple metal/metal-oxide and organic building blocks. To date thousands of MOF variants have been synthesized, and tens of thousands have been theorized in the literature. This leaves a wide area of potential applications for the mind to explore, including gas storage, catalysis, sensing, drug delivery, and more. With an ever expanding MOF community it has become imperative that in order to explore the breadth of Army relevant applications for MOFs, collaborating with external groups and establishing a robust and diverse internal team are absolute musts. A variety of MOF applications and unique interdisciplinary approaches will be discussed in the context of these strong collaborations and a diverse team. For instance, novel MOF analogs were designed for the photocatalytic oxidation of the chemical warfare agent sulfur mustard via incorporation of various photosensitizers, including pyrene, porphyrins, and fullerene, within the MOF structure. One such porphyrin analog was synthesized in E. coli by overexpressing the enzymes used in the Shemin pathway for the synthesis of protoporphyrin IX. Unique, interdisciplinary approaches, such as using synthetic biology, expand the ever-growing MOF field into a seemingly endless playground.

Bio: Dr. Jared DeCoste is a Research Chemist at the Edgewood Chemical Biological Center (ECBC) in the Protection and Decontamination Division. He earned his Ph.D. at SUNY Binghamton under Professor David Doetschman on the decontamination of chemical hazards using zeolites. His last 8 years of experience at ECBC have mainly focused on the development of metal-organic frameworks (MOFs) and other novel materials for the remediation of chemical threats. His work has led to more than 50 manuscripts, 50 oral presentations, and 5 patents, on his research. His work has been highlighted by periodicals and news outlets including Chemical and Engineering News, Materials Today, Fox News, Science Daily, CBRNE World, and Nature. Dr. DeCoste has been recognized through numerous awards including the Achievement Medal for Civilian Service, ECBC's Rookie of the Year for Outstanding Early Career Achievement, ECBC's Safety Award (3X), ECBC's STEM Volunteer Award (2X), and Leidos's Publication Prize for Physical sciences. His work as the Principal Investigator of the Biological Engineering for Applied Materials Solutions (BEAMS) program has been a highlight of his career as it has led him to collaborate and innovate in ways that only working in a highly interdisciplinary field allows. His work has always revolved around finding unique ways to progress science through working together, as evidenced in the pride he takes in aiding others through mentorship, encouraging collaboration, and developing opportunities to learn and evolve in the ever changing scientific landscape. May 2019 Volume 76, Number 2

2019 CHEMAGINATION COMPETITION

We are pleased to announce that the Maryland Section of the American Chemical Society will be sponsoring a 2019 Chemagination Competition. For this event, high school students are asked to imagine that they are living 25 years in the future and have been invited to write an article for ChemMatters, a magazine for high school students that focuses on the role of chemistry in everyday life. The subject of the article is: "Describe a recent breakthrough or innovation in chemistry and/or its applications that has improved the quality of people's lives today." The article is written to fit in one of four categories: Alternative Energy Sources, Environment, Medicine/Health, or New Materials. In addition to the article, students are asked to design a cover for the magazine.

It is a great learning experience for students. In addition to using and adding to their knowledge of science and chemistry, they can improve their "soft" skills of creativity, teamwork and public speaking, skills that will serve them well in their future careers.

There will not be an onsite competition. Rather student teams will be asked to submit an article and video presentation of their "research. First Place winners in each category will go on to compete in the 2019 Mid Atlantic Regional Competition will be held on Saturday, June 1 from 12:00 pm to 5:00 pm at the University of Maryland, Baltimore County (UMBC) in conjunction with MARM 2019 sponsored by the Maryland ACS Section.

Please contact George Farrant (gfarrant@yahoo.com) for more information about this contest and the rules of the competition. Any and/all high Schools in our area are encouraged to compete.

Chemists Celebrate Earth Day





Photos from East Columbia Library





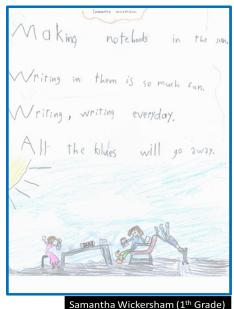
Last Session:

Enoch Pratt Library System Govans Branch Sat, 13 Jul, 2pm

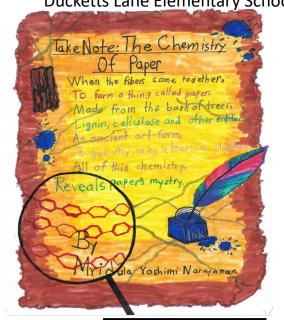
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Local winners of the "Chemist Celebrate Earth Day" Illustrated Poetry Competition

1st Place – K-2 Samantha Wickersham Home schooled



2nd Place – K-2 Mridula Narayanan Ducketts Lane Elementary School



Mridula Narayanan (1st grade)

1st Place – 3rd – 5th
Suniti Das
Eldersburg Elementary



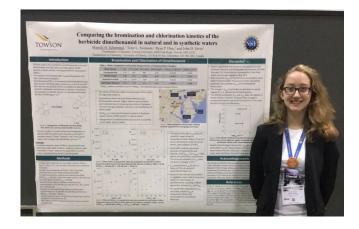
2nd Place $-3^{rd} - 5^{th}$ Pranav Boreddy Ellicott City



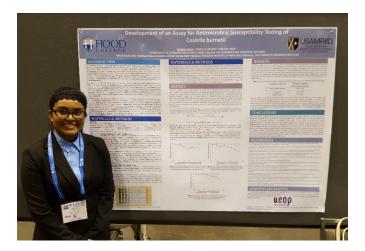
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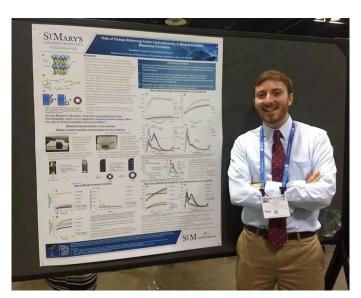
Undergraduate Student Travel Awardees



<u>(1</u>)



<u>(2)</u>



Maisha Khan (2)

Biochemistry major, Hood College

The opportunity to attend the American Chemical Society National Meeting this year as a student was wonderful. It was eye-opening to see the current involvement of chemists in research ranging from food chemistry to drug discovery. As someone interested in using my undergraduate chemical education to pursue a career in medicine, the talks about some of the inner workings of treatment origins was especially interesting. I also really appreciated the chance to present my research from this past year as a poster to an audience of both my peers and professionals established in their fields. Presenting was excellent practice communicating ideas and a great look at the collaborative nature of scientific research in real-time. As a graduating senior with a degree in Biochemistry, overall, attending the ACS Annual Meeting encouraged thought about lessons learned as an undergrad and my own future applying chemistry to a career.

Anastazia Jablunovsky (2)

Chemistry Major, Hood College

My experience at the national ACS conference in Orlando was amazing. I had the opportunity to attend sessions directly related to my work, as well as on subject I had never explored before. As a graduating senior, this helped me learn about all the different paths one can pursue with a degree in chemistry. The most important aspect of the conference for me though, was the people. The ability to network with chemists from all over the country showed me just how integrated the community is. I am incredibly grateful for the opportunity to participate in this conference and I hope to attend many more in the future.

Randy Larsen IV (3)

St. Mary's College of Maryland

I had a fantastic time at the Spring 2019 ACS National meeting! I enjoyed the opportunity share my research with chemists from all over the country. Particularly, I was able to make connections with both industry and academic chemists that I believe will be to our mutual benefit as I progress in my career. I was also able to connect with alumni of St. Mary's and was proud to demonstrate to them how far our research capabilities have come. Finally, I was able to attend some really exciting talks. As an aspiring medicinal chemist, I specifically enjoyed the talk from researchers AMGEN about their new covalent KRAS drug, which is just proceeding through clinical trials. I am incredibly grateful for the support I received from the Maryland Section of the ACS, and I look forward to continuing to represent the Maryland Section in the future!

Marella Schammel (1)

Towson University

I felt my experience at the spring 2019 ACS National Meeting was highly beneficial in terms of professional development. In addition to my own poster presentation, I was able to attend many talks by professionals in the field. I mainly attended talks by people performing research in Environmental Chemistry, including Susan Richardson and William Arnold. At my poster presentation, I was able to connect with others in my field. I spoke with professors and researchers from my area and those who have collaborated with or who know my research faculty advisor. I also was able to connect with a graduate student who performs research in a lab I'm currently interested in joining for graduate school.

Yang Liu UMBC

I had a great experience during the Orlando ACS conference. I met one of our collaborators in our project face to face because he was also a presenter at ACS conference and got a chance to know more scientists in his company. I think this will be very important for my future job looking. I also listened to many interesting talks. There was a special downstream purification session and a lot of people presented the state of art technology used for antibody purification in industry. I also presented my own work during the poster session and a lot of people stopped by and showed their interest. But I wish we had longer time for the poster session because 2 hours are not quite enough to look at other people's interesting posters also.

Mark Niedzwiecki

Towson University

I had a great time traveling to the ACS National Conference in Orlando. I was able to successfully present my research in the Division of Environmental Chemistry, Transdisciplinary Approaches to Sustainable Solutions at the Food-Energy-Water Nexus session. During my poster session, I connected with several graduate students and post-docs that knew my PI or worked in my field. I also had the opportunity to attend several talks during the conference, including M. Christina White's talk on highly selective carbon-hydrogen bond activation. Overall, it was an incredible experience. Thank you very much for providing me with Travel Award, helping me attend the conference.

Ian Gilbert

Towson University

My trip to the ACS 257th National Meeting was a valuable opportunity to prove to myself that I could present the research I've performed at a professional level as well as to converse with a community of scientists from a wide range of disciplines and backgrounds. Watching platform presentations has shown me the characteristics of a successful high-level presentation and will shape how I work to develop future talks I plan on giving. I was thrilled to also have the chance to meet and share a few words with Nobel Laureate K. Barry Sharpless, who designed the asymmetric dihydroxylation catalyst mix that I utilized to accomplish my first ever organic synthesis transformation as an independent undergraduate researcher. Sharing the experience with my fellow undergraduate colleagues from Towson University let me get a better grasp on the research we've been able to complete as students over the past several years, as well as to compare it to the general level of scholarship accomplished by similar students at our level from across the nation. I appreciate the support of the ACS Maryland Section in financially assisting my travel to and from the conference.

Congratulations!

It is our pleasure to announce that two of our USNCO participants achieved High Honors and Honors Positions in the national exam. Well done!

Zhuoyuan Li (Peter) achieved High Honors with the 17th position out of 1300-1500 competitors nationwide. Peter almost made the USNCO Chemistry camp!

Abhinav Modugula, also made the Honors list out of 1300-1500 competitors nationwide.

The Maryland Section of the American Chemical Society congratulates these students!

NEW PROGRAMS



New Program for Senior Chemists

ACS Senior Chemists: Message from the ACS Senior

Committee Chair

 $\underline{https://www.acs.org/content/acs/en/membership-and-networks/senior-chemists.html}$

Information on how to Start a <u>New Senior Committee</u> at your Local Section:

https://www.acs.org/content/dam/acsorg/membership/senior-chemists/senior-chemists-starter-kit.pdf

Announcements

REMINDER:

Receiving the Chesapeake Chemist

Hopefully, if you are reading the Chesapeake Chemist this month, you are receiving it via e-mail from us. We went to electronic-only mailings to our MD ACS membership in October 2006.

Changing your e-mail address? Moving out of the MD ACS area? E-mail changes can be updated either by:

- E-mailing us at <u>acsmarylandsection10@gmail.com</u> give us your member #, full name, and e-mail changes and we can ensure that your records are updated with National ACS.
- Contacting the National ACS membership division: 800-333-9511 (US only) or <u>Service@acs.org</u>

To ensure that you receive the Chesapeake Chemist, please add the MD ACS e-mail <u>acsmarylandsection10@gmail.com</u>.

If you are a member who currently doesn't receive the Maryland ACS Chesapeake Chemist but download it from our website, it is possible that National ACS does not have your e-mail address on file. If you want to receive the Chesapeake Chemist via e-mail, please e-mail us at acsmarylandsection10@gmail.com – give us your member #, full name, and e-mail address and we can ensure that your records are updated with National ACS.

The current edition and previous editions of the Chesapeake Chemist can ALWAYS be obtained via our website: http://www.maryland.sites.acs.org – please see the Newsletter Archive link on the left-hand side of the website.



MATERIALS CHARACTERIZATION

MORPHOLOGY CHEMISTRY STRUCTURE

OM / SEM / EDXA / TEM / SAED, EPA / WDXA XRF / ESCA / AUGER / XRD DSC / TGA / MFTIR

3815 LANCASTER PIKE, WILMINGTON, DE 19805

Phone: 302-998-1184, Fax: 302-998-1836

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